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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,981	05/10/2001	Stephen D. Heizer	COMP:0201/VAN P00-3228	4897

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LEGAL DEPARTMENT M/S 35
P.O. BOX 272400
FT. COLLINS, CO 80527

EXAMINER

LEFKOWITZ, SUMATI

ART UNIT	PAPER NUMBER
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2112

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/852,981	HEIZER ET AL.	
	Examiner	Art Unit	
	Sumati Lefkowitz	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-37 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 4, 6, 8, 10, 11, 13, 15, 18, 19, 23, 27, and 29-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Bailis et al., 6,434,652 (hereinafter Bailis).

a. As to claims 1, 2, 4, 6, 8, 10, 11, 13, 15, 18, 19, 23, 27, and 29-31, Bailis discloses {1}: a processor-based device (i.e., processor base system 10) comprising a power supply (i.e., power supply 12) to generate power for the processor-based device, a peripheral connector (i.e., card connector socket 3) to connect to a peripheral device (i.e., hot plugged card 2) and a control circuit (i.e., hot plug subsystem 16) coupled to the power supply and the peripheral connector, the control circuit being configured to control application of power from the power supply to the peripheral device when the peripheral device is connected to the peripheral connector while the power supply is generating power (note column 2, line 43 – column 3, line 10 and abstract), wherein the control circuit (i.e., hot plug subsystem 16) comprises a first plurality of devices (i.e., card power switch 6 and hot plug controller 9) configured to gradually apply power to the

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peripheral device (note column 5, lines 6-21), and a second plurality of devices (i.e., card power good sensor 7 and hot plug controller 9) configured to monitor voltage applied to the peripheral device from the power supply and to enable access from the processor-based device to the peripheral device when the voltage reaches a predetermined threshold (note column 5, lines 21-27 and column 7, line 1 – column 8, line 22, wherein the enabling of the card bus switch 4 to allow for the connection of the box signal bus and the card signal bus reads on enabling access from the processor-based device, i.e., box, to the peripheral device, i.e., card), {2}: wherein the control circuit is configured to disable access from the processor-based device to the peripheral device until voltage applied to the peripheral device from the power supply reaches a predetermined threshold (i.e., if card power is good), (note column 2, line 57 - column 3, line 3 and column 7, lines 4-12 and column 7, line 59 – column 8, line 22, wherein the fact that the card bus switch is not enabled until the card power is determined to be good reads on disabling access to the inserted peripheral device until the voltage on the peripheral device reaches a threshold and enabling access to the peripheral device when the voltage does reach the predetermined threshold), {4, 27}: wherein the control circuit receives a signal (i.e., card present signal) from the peripheral device when the peripheral connector is connected to the peripheral device (note column 7, lines 20-28) and wherein the control circuit is configured to control application of power to the peripheral device in response to the signal (note column 7, line 40 – column 8, line 22), {6}: comprising a processor in communication with the control circuit (note column 3, line 62 – column 4, line 14), wherein the processor-based device is a {8, 19, 29}: desktop computer, or a {10, 30}: server, or an 11: Internet appliance (note column 3, lines 26-29), and further discloses {13}: a method for hot-plugging a peripheral device to a processor-based device, the

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method comprising the acts of detecting connection of a peripheral device to a processor-based device while the processor-based device is powered and gradually applying power from the processor-based device to the peripheral device in response to detecting connection (note column 5, lines 5-21 and column 7, line 40 – column 8, line 22), monitoring voltage applied to the peripheral device while gradually applying power and enabling access from the processor-based device to the peripheral device when the monitored voltage reaches a predetermined threshold (note column 5, lines 21-27 and column 7, line 1 – column 8, line 22, wherein the enabling of the card bus switch 4 to allow for the connection of the box signal bus and the card signal bus reads on enabling access from the processor-based device, i.e., box, to the peripheral device, i.e., card), {15}: comprising the act of monitoring the voltage applied to the peripheral device while controlling application of power and prohibiting access from the processor based device to the peripheral device until the monitored voltage reaches a predetermined threshold (note column 2, line 57 - column 3, line 3 and column 7, lines 4-12 and column 7, line 59 – column 8, line 22, wherein the fact that the card bus switch is not enabled until the card power is determined to be good reads on disabling access to the inserted peripheral device until the voltage on the peripheral device reaches a threshold and enabling access to the peripheral device when the voltage does reach the predetermined threshold), {18}: comprising the act of connecting the peripheral device to the processor based device (note column 7, lines 20-28).

b. As to claim 23, the claim limitations have already been discussed with respect to claims 1 and 13 above, with the exception of first and second peripheral connectors. Bailis discloses a first and second peripheral connectors (i.e., connector section 2' and connector socket 3, respectively).

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Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park, 6,308,233 in view of Bailis et al., 6,434,652 (hereinafter Bailis).

As to claims 1 and 2, Park discloses {1}: a main device comprising a power supply (i.e., Vcc of column 3, lines 15-17) to generate power for the main device, a peripheral connector (i.e., inherent to insertion/extraction of board into system) to connect to a peripheral device (i.e., board) and a control circuit (i.e., circuit of Figure 1) coupled to the power supply and the peripheral connector, the control circuit being configured to control application of power from the power supply to the peripheral device when the peripheral device is connected to the peripheral connector while the power supply is generating power (note column 2, lines 12-18 and

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column 3, lines 10-65), wherein the control circuit comprises a first plurality of devices (i.e., devices responsible for gradually applying power to the peripheral) configured to gradually apply power to the peripheral device (note column 3, lines 15-54) and a second plurality of devices (i.e., devices responsible for monitoring voltage) configured to monitor voltage applied to the peripheral device from the power supply and to enable access from the main device to the peripheral device when the voltage reaches a predetermined threshold (note column 3, lines 15-65), {2}: wherein the control circuit is configured to disable access from the main device to the peripheral device until voltage applied to the peripheral device from the power supply reaches a predetermined threshold (note column 2, lines 12-18 and column 3, lines 10-65), wherein the control circuit is configured to monitor voltage applied to the peripheral device from the power supply and to enable access from the main device to the peripheral device when the voltage reaches a predetermined threshold (note column 2, lines 12-18 and column 3, lines 10-65).

Park fails to disclose that the main device is a processor-based device.

Bailis discloses that the main device is a processor-based device (i.e., processor base system 10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a processor-based device, as Bailis teaches, in the system of Park so as to allow intelligent, processor-based devices to interface with hot plugged devices.

6. Claims 3, 14, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailis et al., 6,434,652 (hereinafter Bailis) in view of what was well known in the art, as

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exemplified by any one of Hamano et al., 6,178,474 (hereinafter Hamano), Van Wonterghem, 5951660 and Clemo, 5714,809.

As to claims 3, 14, and 26, Bailis discloses gradually applying power from the processor-based device to the peripheral device (note column 5, lines 6-27), but fails to disclose that the first plurality of devices comprises one or more high frequency filters or filtering noise from being delivered from the processor-based device to the peripheral.

Examiner takes Official Notice that filtering high frequency noise or transients from a main unit to a peripheral unit during hot insertion of the peripheral unit into the main unit using low pass filters comprising capacitive circuits is well known in the art of hot insertion, evidence of which may be found in:

Hamano: column 5, lines 9-61, column 6, lines 24-33, column 7,
lines 27-31

Van Wonterghem: column 6, lines 4-27, column 14, lines 7-51, column 16,
lines 19-32, column 18, line 64 – column 19, line 6

Clema: column 3, line 63 – column 4, line 14

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of filters to filter out high frequency transients from reaching a peripheral unit from a main unit since filters provide an inexpensive and reliable means of filtering noise from a main unit and thereby prevent a peripheral unit from becoming damaged during insertion into the main unit, as Hamano, Van Wonterghem and Clema teach in the above cited passages.

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7. Claims 5, 7, 9, 12, and 20-22, 28, and 32-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailis et al., 6,434,652 (hereinafter Bailis) in view of Falkenburg et al., 6,311,242 (hereinafter Falkenburg).

As to claims 5, 7, 9, 12, and 20-22, 28, and 32-37, Bailis fails to disclose that the power supply comprises a battery or that the processor based device is a PDA or laptop or cell phone or that the peripheral device is an option pack or storage device or hard drive or modem.

Falkenburg discloses portable, processor-based devices, which include PDAs, laptops and cell phones, that allow for hot plugging of peripheral devices (note column 2, lines 4-18) and that the power supply for supplying power to the inserted peripheral device is a battery (wherein it is inherent that the power supply of a portable device would be some kind of battery since the device is portable).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ the use of a portable processor based device and its respective battery, as Falkenburg teaches, in the system of Bailis so as to allow for greater mobility and convenience in the use and transport of the processor-based device.

Falkenburg also discloses that the peripheral device is an option pack or storage device or hard drive or modem (note column 1, lines 41-53).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have the peripheral device be an option pack or storage device or hard drive or modem, as Falkenburg teaches, in the system of Bailis so as to expand the capabilities of the processor-based device.

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8. Claims 16, 17, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailis et al., 6,434,652 (hereinafter Bailis) in view of Clemo, 5,714,809.

As to claims 16, 17, 24, and 25, Bailis fails to disclose that the act of controlling application of power comprises the act of limiting rise of voltage applied to the peripheral device from the processor based device or limiting rise of current supplied from the processor based device to the peripheral device.

Clemo discloses that the act of controlling application of power comprises the act of limiting rise of voltage and current applied to the peripheral device (note column 11, line 39 – column 12, line 40).

It would have been obvious to one of ordinary skill in the art at the time of the invention to limit the rise of current and voltage to the peripheral device, as Clemo teaches, in the system of Bailis so as to minimize damage to the peripheral device caused by current/voltage surges and spikes.

Response to Arguments

9. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sumati Lefkowitz whose telephone number is 703-308-7790. The examiner can normally be reached on Monday-Friday from 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached at 703-305-4815.

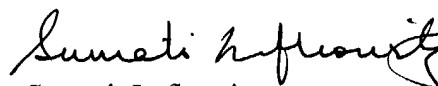
The fax phone numbers for the organization where this application or proceeding is assigned are:

703-872-9306 for Official communications

703-746-5661 for Non-Official/Draft communications

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



Sumati Lefkowitz
Primary Examiner
Art Unit 2112

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August 10, 2004